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ABSTRACT

This brochure introduces Environmental Citizenship in Florida's Middle Schools, which is a school-wide exercise aimed at making middle school students more aware of the natural world around them and their effect on that world. As many school-study areas as possible are used to help students learn how the environment can affect all aspects of their everyday lives. Environmental Citizenship in Florida's Middle Schools is an interdisciplinary look at how students can become environmental citizens of their school or community. Ordinary citizenship is first discussed, followed by a discussion of environmental citizenship. The brochure addresses why environmental citizenship is necessary and how Environmental Citizenship in Florida's Middle Schools works. (ASK)

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FLORIDA

# Environmental Citizenship

## in

## Florida's Middle Schools

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## What *is* Environmental Citizenship in Florida's Middle Schools?

It is a school-wide exercise aimed at making middle school students more aware of the natural world around them and *their* effects on that world. It uses as many school study areas as possible to help students learn how the environment can affect all aspects of their everyday lives. Environmental Citizenship in Florida's Middle Schools is an interdisciplinary look at how students can become environmental citizens of their school or community.

### What are environmental citizens?

*Environmental citizens recognize their responsibility to (and for) the world around them. Florida's environmental citizens know their place in Florida's environment, and know that they are a part of that environment. They take appropriate action based on their knowledge.*

But before we go into a discussion of *Environmental* Citizenship, we should review the concept of *ordinary* citizenship.

## What is citizenship?

In a very limited sense, being a citizen means carrying your country's passport, and having the right to work and, when you are old enough, to vote. Yet there is far more. Being a citizen means that you have those rights, but that you have *responsibilities* too. Citizenship means you should take an active part in the life of your community. That community may be your home, your school, the town or city you live in, your state, or the nation as a whole. There is a strong sense of membership associated with citizenship. In fact, one dictionary definition of citizenship is *membership* in a community.

Active citizenship can take many forms. We join into the life of our communities in a number of ways, each important to the well-being of the communities, the State of Florida, and the country.

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Many of us belong to organizations (charities, community organizations, or advocacy groups) which aim to improve society in one way or another. In newspapers and other media, we discuss, debate, and inform ourselves about the affairs of our communities.

To take an effective part in the management of public affairs, a citizen should have certain basic skills: A citizen must know how the American political system works, and he or she must understand the major issues that face the country and Florida today. There is a close link between citizenship and learning; active and effective citizenship requires a literate, informed citizenry.

## So, tell me again. What *is* Environmental Citizenship?

The term *environmental citizenship* is a convenient way to describe the ethical obligations that connect us to other members of the world around us. Environmental citizenship is an idea . . . that we are an integral part of our environment.

Our environmental responsibilities are rooted in the various communities to which we belong -- most immediately, the family. On a larger scale, we are part of local, national, and global communities. Environmental citizenship is about recognizing our memberships in these different communities and acknowledging that our future depends on how we care for our common home, the Earth.

In the broadest sense, being an environmental citizen means acknowledging membership in the biggest-of-all communities, the community of all living things. It means recognizing that we each make decisions every day that reflect our responsibilities toward other members of the biosphere, present and future.

## Why does environmental citizenship include learning as well as action?

Active citizenship means being involved. *Effective* citizenship means being informed.

Environmental citizens must understand the interrelationships between ecosystems; the cause-and-effect of human actions, locally and globally; and the effects of growing populations on Florida's and the world's environments.

Responsible environmental action requires more than awareness and concern. It requires *understanding*.

We can't all be experts. But we *can* learn enough to understand the issues and choices that experts put before us. These choices often involve decisions about who we want to be, and how we want to live -- individually and collectively. These are decisions about what ends we want to pursue, not about how we pursue them. There are no experts for these sorts of questions; in a self-governing country, citizens decide. Making good decisions requires that we understand the options that experts give us.

As basic literacy is important to citizenship, earth literacy is important to environmental citizenship.

# Why is environmental citizenship necessary?

In four short words: Our long-term survival.

One of our most pressing tasks is that of balancing the overall development of our society with the ecological health of our communities, of Florida, and the planet -- for today *and* for tomorrow. Determining the precise nature of this balance -- which today is often called *sustainability* -- is the challenge.

Environmental Citizen at Work

This challenge will be met only through active and informed citizens. Defining a new social and ecological balance requires that we understand our place in the community of life, that we recognize our responsibilities toward this community, and that we be prepared to take action on this basis. *That* is environmental citizenship.

We start to become environmental citizens as children, by learning as much as we can about the environment around our homes, our schools, our communities, and around Florida generally. From here, it is an easy step for a young person to think about how he or she might affect any or all of these environments. Then, they can start thinking about how they can help to make these environments better. One place to start is in their own schools.

Children spend a major part of their lives in school. Their school room, the cafeteria, the hallways, and the playground are important parts of their lives. But few, if any, of them have given a thought to the environmental resources at their school. Few of them are aware of how their school affects the environment of the community around it. *Environmental Citizenship in Florida's Middle Schools* aims to change that.

## How does *Environmental Citizenship in Florida's Middle Schools* work?

However you, the teacher, want it to work.

It is an ongoing, year-round activity that involves as many classes, students, teachers, school administrators, and others as possible. Students can be involved in activities related to *Environmental Citizenship in Florida's Middle Schools* throughout their tenure at the school, and new students can step in as they arrive from elementary school.

To be most effective, *Environmental Citizenship in Florida's Middle Schools* should involve students in every class and teachers from every discipline. An important benefit is that students from many different classes can learn to work together. This means, of course, that a large part of the school faculty also must cooperate and coordinate their activities as they and their students become involved.

Environmental Citizenship in Florida's Middle Schools provides a way that Florida's school children and their teachers can look at their school's physical environments from many different perspectives, and then react to what they find through a wide spectrum of classroom skills. In the end, Environmental Citizenship in Florida's Middle Schools may open a door that lets a school's citizens suggest how their school might be made even more environmentally friendly. Activities that begin in one year by one class may be continued and nurtured by successive students in successive classes. This is an important aspect of this program. Students may gain a sense of *belonging* to a community -- their school. We would hope that they then will carry this idea of *belonging* with them as they proceed through their schooling, and even into their later lives.

We hope they become environmental citizens.

What follows are a few suggestions for activities from several teaching areas. Teachers are urged to pick and choose, and to develop and expand on this list:

### Science

- Take a look at the natural history of the campus -- from spiders and insects that may be found inside the building to the vegetation, birds and animals on the playground, around the school and in the immediate neighborhood -- and create a *Field Guide* to the flora and fauna of the school.
- Conduct an assessment of the use, storage and disposal of chemicals and hazardous materials used in school and in classrooms, such as chemistry and biology labs, custodial areas, and food preparation areas.
- Working with the custodial staff, look at waste disposal and recycling in the school -- make an assessment of the current situation in school and suggest how to make it work better and maybe even, ways to generate money for the school.

- Again working with the custodial staff, and with other classes, conduct an energy audit -- heating, air conditioning, lighting, food preparation, etc. -- of the school, then report on the results, noting changes that might save energy and money.

## Mathematics

- Work with other students on the school energy audit.
- When recommendations are prepared, work with students in other classes on costs of implementing each recommendation and a cost-benefit analysis for each recommendation.

## Physical education

- Survey playing and recess areas for aesthetics, suitability and safety.

## Geography

- Working with other student activities, map the school (grounds and building) showing current facilities and problem areas. Then, working with school administrators, groundskeepers, and other classes, develop a *futures map* that shows what students would like the school to become.

## History

- Interview former students and graduates of the school to determine what past school and neighborhood environments were like and, perhaps, to help other classes develop goals for what the school's future environment should become.
- Visit the local newspaper office or the historical society and search their files for old articles about the school.
- Check county property records and develop a history of the school property.

## Social Studies (Society, Civics, and Government)

- Using the results of many of the other classroom activities, develop an 'environmental bill of rights,' an 'environmental golden rule,' or 'environmental 10 commandments' for the school.
- Conduct formal "public" hearings on these and on various other aspects of the school's citizenship activities and develop consensus recommendations.
- Survey the school neighborhood to determine how residents near the school feel about the school and how it affects their view of their neighborhood. If there is a neighborhood association, contact its leaders.
- Collect recommendations for how the school could work with the neighborhood to improve relations and become a part of the community.

## Language arts (Journalism and English)

- Produce a guidebook to the school for new students and their parents, pointing out the school's amenities and how the new students can help maintain a safe and healthful school environment.
- Work with other classes and activities in preparation of progress reports and the final reports of their activities.
- Help in the writing and editing of end-of-the-year reports that summarize the actions and activities of all participating classes and put it in the Class Yearbook.

- Follow progress through articles in the school newspaper.
- Stage debates to discuss the findings of other classes.
- Write a story or play about some part of the activity and read or perform it for the school.

### Music

- Record environmental sounds -- ranging from birds, to traffic to school children at play -- and compose a musical "collage" using these sounds as either a backdrop for a school band, or the primary theme.

### Art

- Use various media (sketch, paint and photograph) to develop materials that illustrate the findings and help explain the recommendations that result from this activity.

### All classes

- Work together on various methods to report on these activities -- such as through campus e-mail, or a school page on the Internet's World Wide Web, through a school newspaper, the Yearbook, with schoolyard displays, school assemblies, neighborhood and community activities, parent-teacher association meetings, and though local newspaper and television coverage.

*A word of advice: Neither students nor their teachers should begin any program of environmental assessment without the knowledge -- and support -- of the school's administration. However, school administrators should be eager to work with you on projects such as this one, which have as a goal a better school environment and students who are environmental citizens.*

## Analysis and Implementation

Ideally, the activities for Environmental Citizenship in Florida's Middle Schools will be conducted by students from many different classes and study areas -- and by as much of the school student body as possible. The analysis and development of the findings and recommendations also should be incorporated into the activities of many different classes -- as science reports, essays, pictures, plays, musical productions, poems, maps, or computer reports and student world wide web pages. However, if school-wide participation is not possible, one or a few classes can take part.

An important part of an environmental assessment is its analysis -- and implementation.

Students should look at the data they collect and consider its ramifications. How might *they* have contributed to any problems they find -- such as litter or graffiti on the property or in the neighborhood, or damaged equipment, or bare, eroded soil in the playground? How could they -- and others -- help make it better?

Finally, students should investigate how they or others might *implement* any suggested changes, perhaps by working with the parent-teacher organization, the school and school district administrations, custodians, groundskeepers, and the neighborhood. Perhaps students might appear before the local school board to present their findings and recommendations. Community newspapers also will be interested. An excellent way for the school to report to itself and to the community the progress on and outcome of these activities is for students to develop a home page on the Internet's World Wide Web.

Note: This material was written with the middle school student in mind. Teachers may want to adapt it, however, to fit the needs of high school students and, perhaps even for elementary schools. The levels of achievement in the Sunshine State Standards would have to be revised to meet the requirements of the grades that are affected -- however, the general study areas should be similar.

## Support Material

The Sunshine State Standards -- Available from the Florida Department of Education. 325 West Gaines Street, Tallahassee, Fl 32399-0400. On the Internet -- *http://www.firn.edu/doe/doehome.htm* -- through the World Wide Web.

Related Information available on the Internet through the World Wide Web

- *Planet Neighborhood -- http://www.weta.org/planet/main/index.html* -- an excellent environmental education activity from National Public Radio. The web site contains on-line activities that are related to this Environmental Citizenship in Florida's Middle Schools project.

- *Sustainable Living -- http://www.crest.org/sustainable/index.html* -- contains Internet links to a number of other world wide web sites that contain information that can be used by students in this activity.

- *Starfish: Education Resources for Sustainability -- http://www.starfish.org/* -- is a site useful mainly by teachers. Here you will find methods, bibliographic materials, and other resources that tie in with the Environmental Citizenship in Florida's Middle Schools project.

- *CE Net -- http://www.cce.cornell.edu/* -- From the Cornell University (New York) Cooperative Extension Service is one of many how-to oriented sites maintained by extension service around the county. Students and teachers will find useful information for their projects on sites like this one.

- The University of Florida, IFAS, at: *http://hammock.ifas.ufl.edu/* where you will find the *Florida Energy Handbook -- http://hammock.ifas.ufl.edu/txt/fairs/49445.*

- The *Personal Environmental Impact Calculator* -- *http://fatman.neep.wisc.edu* --will let students discover their families' own impacts on the environment, and maybe give them ideas for projects.

- The United States Environmental Protection Agency -- at *http://www.epa.gov* -- maintains a site with a great deal of environmental, recycling, energy savings and other citizenship-related material.

- The Department of Environmental Protection web site--*http://www.dep.state.fl.us*
  Click on *Publications* to find:
  - *Toward Environmental Citizenship*, a primer on the concept of environmental citizenship.
  - *Ecosystem Management Around the Home*, tips for ecological living that also apply to school.
  - *You, Your Automobile and Your Environment: Environmental Citizenship on the Road*. Information for would-be drivers on the environmental effects of the automobile.

- The *Enviropage* -- *http://www.fl-enviropage.org* -- to find: *The Environmental Citizenship Handbook*. More tips for environmental living, including many for school.

(The last four publications also may be ordered in limited quantities from the Florida Department of Environmental Protection Order by telephone from (850) 488-9334.)

Printed materials

- *The Consumer's Handbook for Reducing Solid Waste*. Source: U.S. Environmental Protection Agency, 1992. EPA 530-K-92-003. (EPA Region IV, 61 Forsyth Street, Atlanta, GA 30303.)
- *How You Can Reduce Air Pollution*. Source: U.S. Environmental Protection Agency. EPA 450-K-92-002
- *Clean Water in Your Watershed: A Citizens Guide to Watershed Protection*. Source: EPA through the Terrene Institute, 1717 K Street, NW, Suite 801, Washington, DC 20006 (202) 833-8317
- *Florida Yards and Neighborhoods Handbook: A guide to environmentally friendly landscaping*. Bulletin 295. Source: University of Florida, Institute of Food and Agricultural Sciences, Gainesville, FL 32611.
- *Hazardous Wastes from Homes*. Source: Florida Department of Environmental Protection / Enterprise for Education, Inc. 1988.

(continued)

**Florida Sunshine State Standards (Grades 6-8)** that might apply (at least in part) to this activity:

## Language Arts

### Reading

Standard 1: The student uses the reading process effectively.
Standard 2: The student constructs meaning from a wide range of texts.

### Writing

Standard 1: The student uses writing processes effectively.
Standard 2: The student writes to communicate ideas and information effectively.

### Listening, Viewing, and Speaking

Standard 1: The student uses listening strategies effectively.
Standard 3: The student uses speaking strategies effectively.

### Language

Standard 2: The student understands the power of language.

## Mathematics

### Number Sense, Concepts, and Operations

Standard 1: The student understands the different ways numbers are represented and used in the real world.
Standard 4: The student uses estimation in problem solving and computation.

### Measurement

Standard 1: The student measures quantities in the real world and uses the measures to solve problems.
Standard 2: The student identifies patterns and makes predictions from an orderly display of data using concepts of probability and statistics.
Standard 3: The student uses statistical methods to make inferences and valid arguments about real-world situations.

## Science

### Processes that Shape the Earth

Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.
Standard 2: The student understands the need for protection of the natural systems on Earth.

### How Living Things Interact with Their Environment

Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in the environment.
Standard 2: The student understands the consequences of using limited natural resources.

### The Nature of Science

Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Standard 2: The student understands that most natural events occur in comprehensible, consistent patterns.
Standard 3: The student understands that science, technology, and society are interwoven and interdependent.

## Social Studies

### Time, Continuity, and Change [History]

Standard 1: The student understands historical chronology and the historical perspective.

### People, Places, and Environments [Geography]

Standard 1: The student understands the world in spatial terms.

### Government and the Citizen [Civics and Government]

Standard 2: The student understands the role of the citizen in American democracy.

Support Material (cont.)

- Poster: *Know Your Chemicals.* Source: Florida Department of Environmental Protection. 1995. Dangerous household chemicals and easy-to-find alternatives.
- *Stormwater Management: A Guide for Floridians.* Source: Florida Department of Environmental Protection, Stormwater-Nonpoint Source Section.
- *What Have You Done for Wildlife Lately? A Citizens Guide to Helping Florida's Wildlife.* Source: Florida Game and Freshwater Fish Commission.
- *Planting a Refuge for Wildlife: How to create a backyard habitat for Florida's Birds and Beasts.* Source: Florida Game and Fresh Water Fish Commission, Nongame Wildlife Program / U.S. Department of Agriculture, Soil Conservation Service.
- *The Schoolyard Wildlife Activity Guide*
- *Handbook To Schoolyard Plants and Animals of North Central Florida*
- *Schoolyard Ecosystems of Northeastern Florida*

All three of the above publications are available from the Florida Game and Fresh Water Fish Commission. More information is available from the Commission at the address below, or the World Wide Web at *http://fcn.state.fl.us/gfc/educator/schoolya.html*

Other, related, curricula:

- *The 4-Rs* solid waste management curriculum ,
- *Biodiversity* curriculum,

Both available from the Florida Office of Environmental Education - (850) 487-7902

Organizations that can help (with other materials, suggestions, speakers, etc.):

- The DEP's Office of Environmental Education (DEP), Office of Environmental Education, 3900 Commonwealth Blvd., MS 30, Tallahassee, FL 32399-3000. (telephone: (850)488-9334.)
- The Florida Game and Fresh Water Fish Commission, Nongame Program, 620 S. Meridian Street, Tallahassee, FL 32399-1600 (telephone: (850) 488-3831)
- Local Agricultural Extension Offices (there is one in every county). Their addresses and telephone numbers can be found on the Enviropage at *http://www.fl-enviropage.org.*

## NOTES

DEPARTMENT OF ENVIRONMENTAL PROTECTION
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